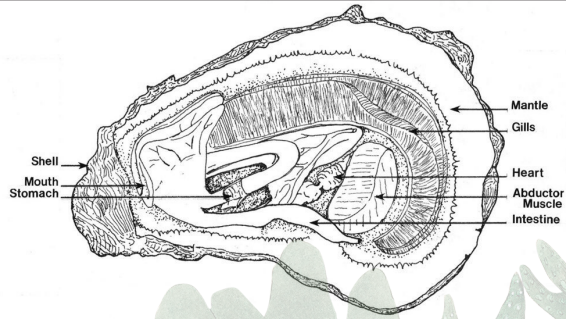


HOW TO SUPPORT OUR EFFORTS

If you would like to help, please write a check to the Town of Phippsburg, (go to Town Hall or mail to 1042 Main Road, Phippsburg, 04562), with a designation to the Basin Oyster Project (BOP). Your donation will allow us to continue our work toward creating sustainable oyster reefs in the Basin; provide education on oysters and oystering in Phippsburg; celebrate oyster restoration with informational tours, age-appropriate school lessons, and help sponsor an annual oyster festival. If you share your e-mail, we will gladly send you bulletins about our on-going work.



BOP’S GRANT STATUS

Our deepest thanks to The Nature Conservancy for their steadfast support of the Basin Oyster Project over time and specifically through the SOAR Resiliency Fund & Purchase Program. Past funding includes grant and fellowships received from: The University of Maine’s Aquaculture Research Institute, Maine Sea Grant Program Development Funds, the Davis Conservation Foundation, Ferris Olson Family Foundation for Ocean Stewardship, Maine Community Foundation & individual donations.

We are nearing the completion of a three-year grant from the Maine Community Foundation that allowed us to expand our collaboration to include researchers at the University of Maine and Midcoast Conservancy and compare our findings to work being done in the Sheepscot and Damariscotta estuaries.

Our work would not be possible without donations of time, materials and resources from our active participants and supportive organizations and townspeople. Thank you for your support!

MEET THE TEAM!

- Jessie Batchelder** - Manomet fisheries project manager
Caitlin Cleaver, PhD - Assistant Professor of Environmental Studies, Colby College
Dean Doyle - Basin Oyster farmer, Phippsburg Shellfish Commission
John Herrigel - Maine Oyster Company owner, Phippsburg
Avery Hunt - Phippsburg resident and writer
Joe Jerome - Northeast Saltwater Charters, Phippsburg
Dot Kelly - Phippsburg Conservation Commission and Lead for the BOP
Michele LaVigne, PhD - Associate Professor of Earth and Oceanographic Science, Chair of Earth and Oceanographic Science Department, Bowdoin College
Marissa McMahan, PhD - Manomet Vice President of Fisheries
Rebecca Schultz - Basin neighbor and NRCM scientist
Helena Tatgenhorst - The Nature Conservancy

A number of Colby, Bates and Bowdoin summer research assistants, the New Meadows River Shellfish Cooperative, researchers from The University of Maine, and Midcoast Conservancy.

OUR MISSION & GOALS continued

Our first major funding came from a \$20,000 Nature Conservancy grant which focused on aquaculture, With this money, we were able to ramp up our scientific studies of the variables involved in making an oyster reef successful (with help from Bates, Bowdoin, and Manomet Fisheries). We are still researching the life cycle of the oyster - from spawning to oyster maturity. We continue to assess water chemistry and the effect of predators, as well as quantifying the many environmental factors that contribute to a healthy oyster.

Now in our seventh full year of operation, our goal is to help oysters continue to establish a foothold in the Basin, and BOP is doing so through a combination of science, education, communication, and fun events. The good news: we are seeing positive results.

Basin Oyster Project

Shellfish Reef Restoration

UPDATE ON BOP OYSTER EFFORTS, from Caitlin Cleaver

We continue to monitor small-scale oyster reefs at our two permitted locations in the Basin - Thistle Point & Denny Reed. In the first few years, we purchased eyed larvae, which we settled on cured shell and grew to a larger size to plant on site. However, since 2023, we shifted our strategy to engage New Meadows oyster farmers by purchasing, at a discount, their “doubles & uglies” -- oysters that are fused together or are too misshapen for retail sale. After they are counted and measured, we plant them and then track how they do. These more mature oysters provide habitat and serve as a broodstock, producing additional oyster larvae that we hope will survive in the Basin.



Collaborators helping with a Purchase Day where farmers drop off oysters to be planted on the restoration sites.

Oysters in the Basin are likely reproducing
Samples of adult oysters collected monthly in the summer of 2024 appear to build reproductive tissue and then spawn. This has implications for the ability of a reef to become established and potentially sustained with natural recruitment or settlement of larval oysters.

Evidence of some settlement
Shell bags put in the low intertidal zone in May and retrieved in October have some baby oysters settling on them indicating that there are larval oysters in the Basin. Again, another positive sign for reef building; however, settlement is very low. Photos below show a newly settled oyster.

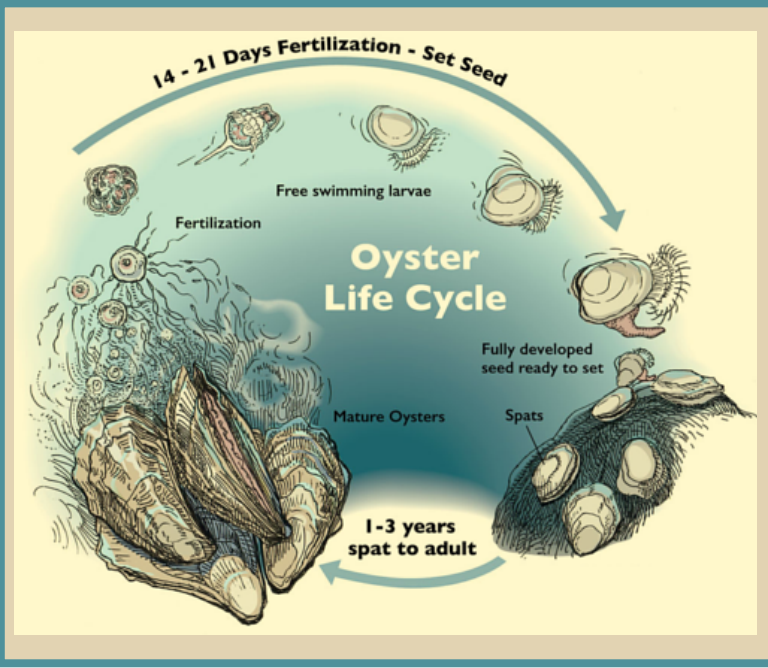


OUR MISSION & GOALS

The Basin Oyster Project is a non-profit volunteer group of local oyster farmers, scientists, Phippsburg Conservation Commission members, neighbors, and educators. Our mission is to create a sustainable oyster reef in the Basin on the New Meadows River and to understand what is necessary to make that happen.

We first got together in late 2019, after The Nature Conservancy asked our Conservation Commission to take over their early oyster restoration efforts in the Basin, within the 2000 acres donated by the Hatch family. Despite Covid restrictions, interested people joined our effort via zoom calls and outdoors, while we continued the Nature Conservancy effort of growing larvae to become mature oysters.

See other text box for more



IT'S ALL HAPPENING THIS SUMMER WITH THE BASIN OYSTER PROJECT!

SHARING PROJECT RESULTS

Our educational programming engages local school kids with the shellfish industry and aquaculture. We are using oyster science to develop hands-on lessons for groups of various ages. We also coordinate with oyster farmers and researchers locally and along the East coast and offer community outreach events.

In the past, we hosted a graduate program class from Tufts (affiliated with Wolfes Neck Farm in Freeport), Bowdoin College, Bates College and Colby College courses as well as various elementary school classes visiting Base-camp where Dot demonstrated some filtering experiments.

We've given presentations at the Conservation Commission, Popham Beach Library, Sierra Club Community Conversations, Harpswell Heritage Land Trust, Maine Conservation Voters Lunch & Learn Series and others.

We've presented project results at the Maine Fishermen's Forum Shellfish Focus Day, and the annual meetings of the Ecological Society of America, Aquaculture America, and the American Geophysical Union. We have plans to present at the International Shellfish Restoration Society annual meeting in October 2026.

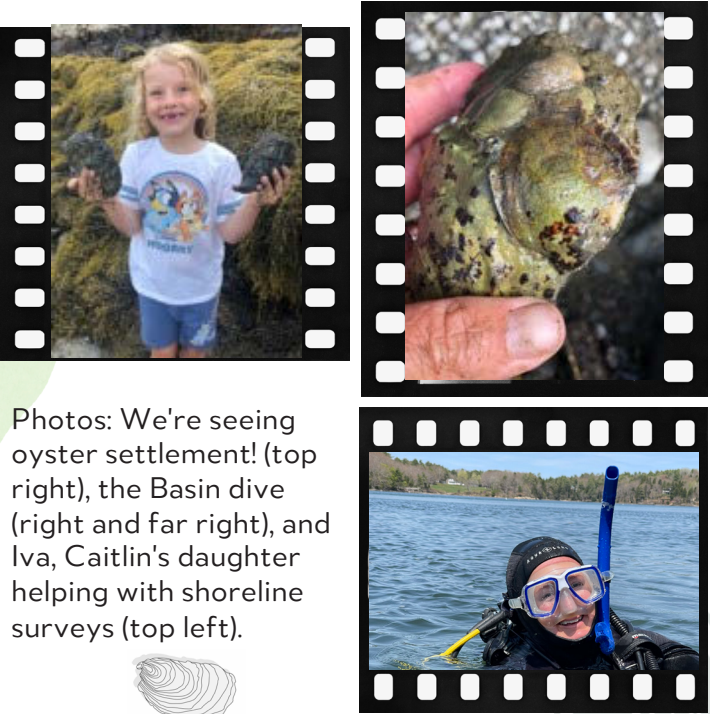


Dyke Newell Students at Basecamp for Dot's oyster filtration demo.

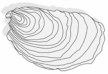
Looking Ahead

Preliminary results show that an oyster reef can potentially be built; however, there are challenges with low settlement rates, but oysters do grow and survive. Planting of the adult oysters has shifted the substrate to more favorable habitat for additional oysters as well as increased the number of species present. Community meetings showed that wild shellfish harvesters, oyster farmers and community leaders and the conservation community are all invested in protecting and improving coastal health.

The Basin Oyster Project team hopes to continue monitoring the sites and potentially pursue future funding to support additional the purchase of additional oysters. We also hope to apply the community-based model implemented in Phippsburg at another location within the town as well as in another community to understand if the lessons learned here can be applied elsewhere.



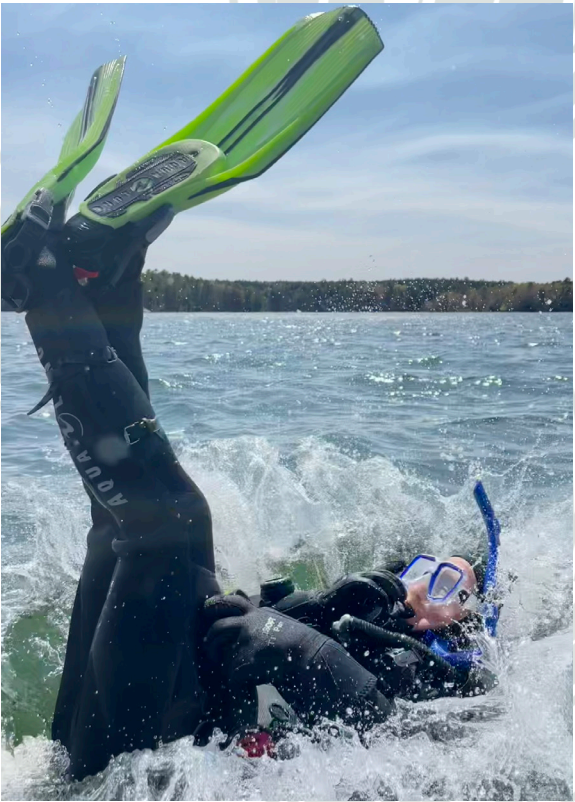
Photos: We're seeing oyster settlement! (top right), the Basin dive (right and far right), and Iva, Caitlin's daughter helping with shoreline surveys (top left).



Below: "Uglies" or oversized or double oysters purchased from the New Meadows River Shellfish Coop, which were planted on our restoration sites to help create reef substrate and potentially produce baby oysters. Photo: Tate Clark, TNC



Above: Underwater shot of shell hash in the Basin on a winter day. Note the clarity of the water and the oyster shell in the middle.



Update continued

Baseline of adult population in the Basin

Each summer, we do walking shoreline surveys to assess the existing oyster population found in the intertidal zone at four different locations within the Basin. Oysters exist although at relatively low densities. The map below shows the locations where we found alive oysters in our surveys each year.

